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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,369	08/23/2006	Jay A. Nelson	899-73077-04	7108

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EXAMINER	
WANG, SHENGJUN	
ART UNIT	PAPER NUMBER
1617	
MAIL DATE	DELIVERY MODE
07/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,369	NELSON ET AL.	
	Examiner	Art Unit	
	Shengjun Wang	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-19,35-46,80-93,103-123 and 132-137* is/are pending in the application.

4a) Of the above claim(s) *6-8,11-19,35-46,80-84,86-88,90-92,103-117 and 123* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,9,10,85,89,93,118-122 and 132-137* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt of applicants' remarks submitted April 1, 2008 is acknowledged.

Claim Rejections 35 U.S.C. 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 5, 9, 10, 85, 89, 93, 118-122, 132-137 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benish et al. (US 6,504,914, and US 2004/0077663) in view of Hanke et al. (J. Biological Chemistry, 1996, Vol. 271, No. 2, p695-701).

3. Benish et al. teach a method of using compounds selectively inhibiting Src family of tyrosine kinase (such as Yes, Fyn) and thereby treating various virus infections, particularly HIV. See, particularly, the abstract and the claims in '914 and the claims in '663. Benish et al. further teaches that it is known that The HIV-1 Nef protein interacts with members of the Src family of tyrosine kinases. Nef mediates downregulation of CD4 membrane expression, modification of T-cell activation pathways, and increases virus infectivity. Col. 3, lines 15-30 in '914.

4. Benish et al. do not teach expressly the employment of PP2 as the Src inhibitor for treatment of HIV infection or inhibiting the virus duplication.

5. However, Hanke et al. teach that PP2 is a known Sre family selective tyrosine kinase inhibitor. See, particularly, the abstract, the structure at page 697 and the table 1 at page 698.

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed the invention was made, to treat HIV infection by administering to the patients PP2, a known Sre family selective tyrosine kinase inhibitor.

A person of ordinary skill in the art would have been motivated to treat HIV infection by administering to the patients PP2, a known Sre family selective tyrosine kinase inhibitor because Sre family tyrosine kinase is known to facilitate HIV infection, and selective Sre family tyrosine kinase inhibitor is known to be useful for treating HIV, and PP2 is a old and well-known selective Sre family tyrosine kinase inhibitor. As to claim 118, reciting "inhibiting replication", note, the actual step s therein is to contacting a cell infected by HIV with PP2, therefore, a method of treating HIV infected patient with PP2 would meet the limitation of claimed method. Further, since Src tyrosine kinase in known to facilitate the infection of HIV, inhibition of the kinase would have reasonably expected to decrease the replication of the virus.

Response to the Arguments

Applicants' remarks submitted April 1, 2008 have been fully considered, but are not persuasive.

Applicants disagreed with the rejection on the record but were unable to produce any reasoning as why or how the rejection is invalid. The rejection is maintained.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shengjun Wang whose telephone number is (571) 272-0632. The examiner can normally be reached on Monday to Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan, can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Shengjun Wang/
Primary Examiner, Art Unit 1617